

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-010025**Date Inspected:** 27-Oct-2009**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Xu Yumin**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Segments**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Dan Hernandez was present during the times noted above to observe the fit up, welding and related activities associated with the fabrication of the San Francisco Oakland Bay Self Anchored Suspension Bridge at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

OBG Trial Assembly Yard

Segment 2AW/2BW

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of plug welds. The welders are identified as #054467 and was observed welding in the 4G (overhead) position using approved Welding Procedure Specification WPS-345-SMAW-4G-repair-misdrilled bolt hole for CWR8278, UT repair on Plate1450A at the following Y locations 330mm to 436mm, 495mm to 595mm and 745mm to 830mm from cross beam side edge of Bottom Plate.

Segment 2AE/2BE

This QA Inspector observed grinding of the CJP weld reinforcement on the Bottom Plate splice repairs, interior and exterior for Ultrasonic Testing (UT) on the repair.

Segment 6AE

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This QA Inspector observed beveling of the Bottom Plate and Side Plates, cross beam and bike path sides with the use of a mechanical guided torch at the 5BE/6AE field splice location.

### Segment 6BE

This QA Inspector observed the removal of tack welds by grinding from the WT stiffener hold back weld location along the Bottom plate and both Side Plates at the 6BE/6CE segment CJP splice.

### Segment 5AE

This QA Inspector observed ZPMC personnel performing Magnetic Particle Testing (MT) on the Side Plate WT stiffener hold back fillet welds along the 4BE/5AE field splice location

### Segment 1AW

The Caltrans Quality Assurance (QA) Inspector performed Magnetic Particle Testing (MT) on 1AW, Corner Assembly CA105 Segment tag #8 and Corner Assembly CA106 Segment tag #9 on Complete Joint Penetration (CJP) welds of Stiffener Plate to Corner Assembly Diaphragm T-Joints at Panel Point 10. MT was performed for NDT Inspection Notification Sheet Document #004489. The following four (4) Longitudinal and one (1) Transverse Crack were discovered:

CA105 Tag #8 (Counter Weight side)

DP734-011 4mm in length, Longitudinal Crack

EP176-048 4mm in length, Transverse Crack

CA106 Tag #9 (Cross Beam side)

EP175-046 6mm in length, Longitudinal Crack

SP787-041 11mm in length, Longitudinal Crack

SP787-045 2mm in length, Longitudinal Cracks

ZPMC technicians previously tested and accepted these welds. An Incident report was written for this issue.

ZPMC Quality Control (QC) Inspector is identified as Song Hui. QA Inspector observed QC Inspector verify welding parameters. The welding variables recorded by QC appeared to comply with the Applicable WPS.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### Summary of Conversations:

No relevant conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 150-0042-2372 , who represents the Office of Structural Materials for your project.

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**Inspected By:** Hernandez,Dan

Quality Assurance Inspector

**Reviewed By:** Carreon,Albert

QA Reviewer